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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/886,167 | 06/20/2001 | Thomas C. Poff | IREA0002C | 6707 |

28875 7590 08/02/2004

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EXAMINER

LE, UYEN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2171

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,167

Applicant(s)

POFF ET AL.

Examiner

Uyen T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-37 is/are allowed.
- 6) ☐ Claim(s) 1,2,4,7,8,15,16 is/are rejected.
- 7) ☒ Claim(s) 3,5,6,9-14 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION***Response to Request for Reconsideration***

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-37 of this application. The provisional application 60/045,951 merely consists of an interview with a client about a "hardware invention" and a single drawing. It is not clear how the features claimed in claims 1-37 are supported by that interview. Therefore, the examiner maintains rejection to claims 1, 2, 4, 7, 8, 15, 16 using Levy (US 5,623,892) and herein repeated.

It is also noted that applicant filed affidavits and declarations in the parent application 08/958,052 now US Patent 5,923,892. Applicant is reminded that affidavits or declarations, such as those submitted under 37 CFR 1.131 and 37 CFR 1.132, filed during the prosecution of the parent application do not automatically become a part of this application. Where it is desired to rely on an earlier filed affidavit or declaration, the applicant should make the remarks of record in the later application and include a copy of the original affidavit or declaration filed in the parent application.

Applicant filed a terminal disclaimer on 17 June 2004. Consequently, double patenting rejection to claims 1-37 over US Patent 5,923,892 is withdrawn.

Specification

The abstract of the disclosure is objected to because it exceeds the limit of 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 7, 8, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy (US 5,923,892) of record in parent application, in view of Marsh (US 5,621,434) of record in parent application.

Regarding claim 1, the claimed apparatus for accelerating a processor running an object-oriented programming language including hardware accelerator interfaced with said processor for implementing at least one application framework is met by the system of Levy comprising a host processor and coprocessor, the coprocessor executing platform-independent code to free the host processor for other tasks (see column 5, lines 38-42, column 6, lines 23-37). Claim 1, lines 4-6 "wherein said at least one application framework comprises a set of classes that embodies an abstract design for solutions to a number of related problems" merely read on the well known definition of an application framework as shown by Marsh (see column 4, line 44- column 6, line 65). Clearly, the system of Levy includes such a framework since a set of classes is indispensable to implement the Java virtual machine (see column 6, lines 50-56). The claimed software stub is met when Levy shows that the procedure by which the host processor controls the coprocessor may be set forth in software (see column 6, lines 33-36).

Claim 15 merely differs from claim 1 by "a means for a software stub" instead of

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"a software stub", thus is rejected for the same reasons stated in claim 1 above.

Regarding claims 2, 16, the claimed hardware object management system interacting with said hardware accelerator merely manages instances of said application framework and the states of values assigned to said instances. Although not specifically shown by Levy, such a hardware object management system interacting with said hardware accelerator is indispensable to keep track of application instances in an object oriented environment. Therefore, it would have been obvious to one of ordinary skill in the art to include a hardware object management system while implementing the system of Levy in order to keep track of application instances.

Claim 4 corresponds to the method of claim 1, thus is rejected for the same reasons discussed in claim 1 above.

Regarding claim 7, although Levy does not explicitly mention that the hardware accelerator implements the Java.NET and Java.IO application frameworks, it is well known in the art that Java.NET is a core application framework providing classes for networking support and Java.IO provides the input and output classes for writing to and reading from streams and handling files. Therefore, it would have been obvious to one of ordinary skill in the art to include a Java.NET circuit to implement the Java.NET and Java.IO frameworks in the coprocessor of Levy in order to provide networking capability and alleviate the load of the main processor.

Regarding claim 8, a windowing /view system and a connectivity engine as claimed are indispensable to any Java user interface-based applet and application in a network system. Therefore, it would have been obvious to one of ordinary skill in the art

to include the claimed steps and to use the connectivity engine in said Java.NET circuit while implementing the method of Levy for the Java.NET and Java.IO frameworks to function.

Allowable Subject Matter

Claims 20-37 are allowed.

Claims 3, 5, 6, 9, 10-14, 17, 18, 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and upon submission of affidavits and declarations submitted in the parent application.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abdelguerfi et al, "A hardware accelerator for smart information systems", IEEE 1993, pages 323-327.

Skorc et al, "Architectural requirements for multimedia image compression and a solution based on VLSI hardware accelerator", IEEE 1994, pages 312-320.

Tomiyasu et al, "KUMP/D: the Kyushu university multi-media processor", IEEE 1995, pages 367-374.

S. Kang, "High performance hardware accelerator for design-error simulation", IEE Proc. Circuit Devices Syst. Vol. 144, No. 2, April 1997, pages 81-87.

David M. Lewis, "A programmable hardware accelerator for compiled electrical simulation", IEEE 1988, pages 172-177.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen T. Le whose telephone number is 703-305-4134. The examiner can normally be reached on M-F 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

23 July 2004


UYEN LE
PRIMARY EXAMINER